COMPUTER USAGE STUDY COURSE

ENROLLMENT FORM

Registrar:

Please enroll me in Computer Usage Study Course. I understand this application for enrollment is subject to my meeting your educational requirements.

I choose the indicated Payment Plan and enclose my ☐ check ☐ money order for amount required.

TIME PAYMENT PLANS

☐ 24 MONTHS
$50.00 Enrollment Fee
25.00 Down Payment
$75.00 TOTAL ENCLOSED
($27.00 per month for the next 24 months)

☐ 12 MONTHS
$50.00 Enrollment Fee
50.00 Down Payment
$100.00 TOTAL ENCLOSED
($48.00 per month for the next 12 months)

☐ CASH PAYMENT PLAN
$ 50.00 Enrollment Fee
600.00 Full Tuition
$650.00 TOTAL ENCLOSED
(No further payments)

Name _____

Address _____

City _____ **State** _____ **Zip** _____

NYS-1

Computer Usage Study Course

YOUR OPPORTUNITY IN THE COMPUTER AGE

Developed and presented exclusively by

COMPUTER USAGE EDUCATION, INC.

A SUBSIDIARY OF COMPUTER USAGE COMPANY, INC.

The inescapable conclusion is that in the age now dawning, neither the middle manager nor the computer can get along without the other... It remains for the enlightened executive to up-grade his own abilities to meet today's sterner challenge.

DUN'S REVIEW

Many of the decisions that middle-management men now make will be made almost automatically by a computer.

WALL STREET JOURNAL

The computer has already begun subtly to alter the marketing structure of power within many corporations... by placing the executives who understand and control computers closer to policy-making and decision-making positions. Tomorrow's marketing executives will be completely computer oriented.

ADVERTISING AGE

The substantial improvement it has made in their profits and the general conduct of their business indicates that data processing will eventually become almost universal among retailers. The day of instinctive management is gone.

NATION'S BUSINESS



Your place in the computer age

- *How will the computer affect your future?*
- *Why does a knowledge of computers enlarge your advancement opportunities?*
- *What kind of training is best for you?*
- *How long will it take?*
- *How does Computer Usage Study Course prepare you to master computers—at home?*

Back in 1950, questions like these wouldn't have entered your mind. Only a few computers were being made. As far as management was concerned, the age of the computer had not yet dawned.

How different it is today! Computers are in round-the-clock operation everywhere. Computers have become a major factor in business life. Sooner or later, a computer will guide the vital decisions of your organization. Already, in industry after industry, the computer has taken over.

Preparation now to meet the challenge—and opportunity—of the computer can be your stepping-stone to advancement...a swift and sure short-cut to high-level management.

Computer Usage Study Course uniquely trains you to turn the computer's inevitability to your advantage.

The following pages will show you how the Course helps you to assume your place in the computer age....

COPYRIGHT 1967, COMPUTER USAGE EDUCATION INC.

Learn computers and advance.

What would you mean to your company if you were the *one* man who understood computers? What would it mean to your career if you knew computers so well that you could actually write a program for IBM's newest computer, the System/360?

The answers are self-evident. Your career potential would be expanded tremendously. Mastery of the computer automatically catapults you above those who are unfamiliar with this far-reaching technology.

Whether you are the president of your company, a staff executive, or a middle or junior manager, knowing what the computer can achieve and how to achieve it is the only certain way to make the right decisions.

Computer Usage Study Course trains you to do just that. It thoroughly briefs you on every computer phase: history, real time, time-sharing, computing centers, systems analysis, and more. You learn how to write programs for the IBM System/360—programs that will run on our computer.

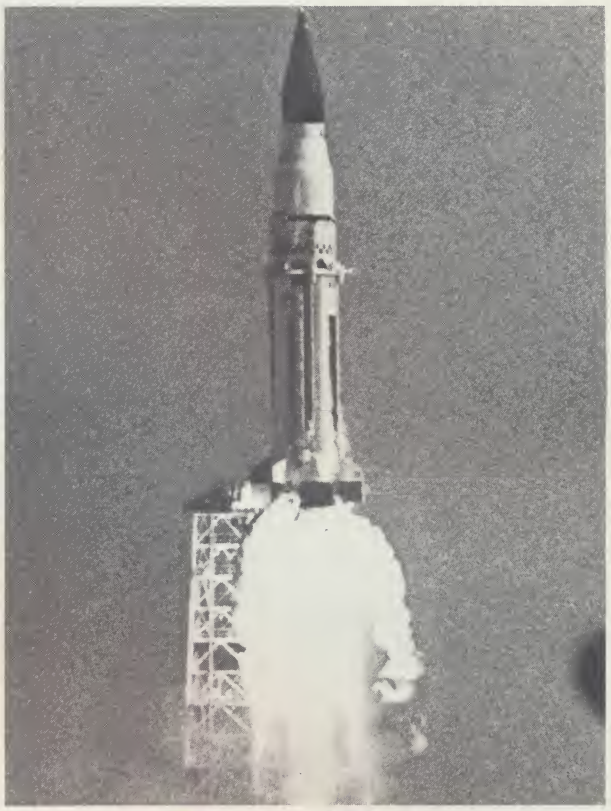
Why study programming—if you do not intend to become a programmer? We firmly believe that the only effective way to truly understand computers is to understand programming. How do you best understand programming? By doing it. And seeing the results of what you have done.

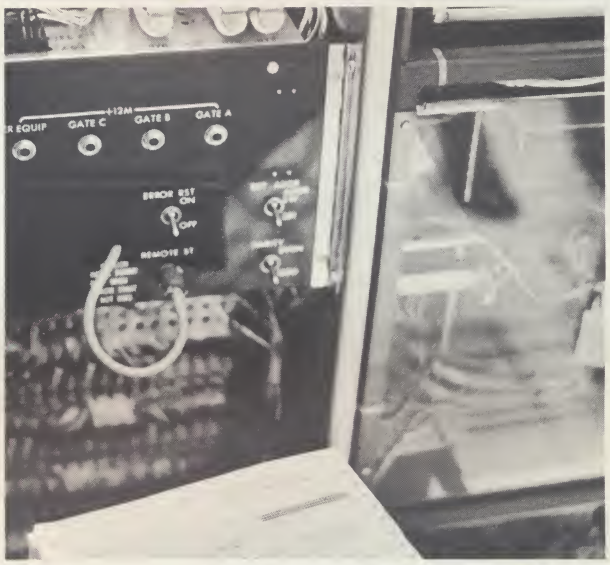
With sales, inventory, warehousing, production and other company operations being computerized, a general knowledge of computers is not enough. The programming portion of Computer Usage Study Course gives you the specifics you require to direct such operations and evaluate the information printed out by the computer.

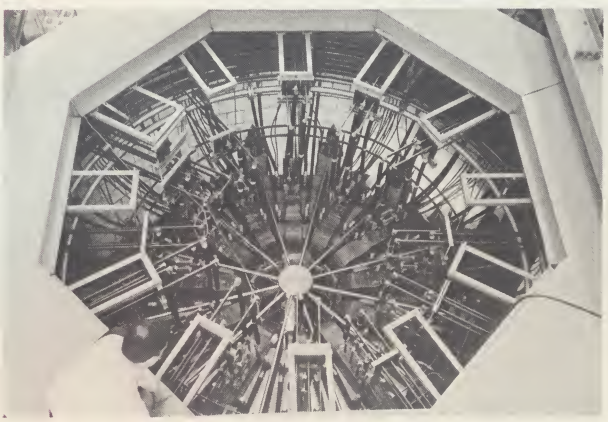
Realistic application lessons show you how the computer functions with savings banks, subscriptions, reservations, payrolls, information retrieval, market research—24 important areas.

With in-depth practical training like this, you will be well-equipped to solve, or assist management in solving, computer problems within your very own company... and be rewarded with recognition, promotion, and salary escalation.

Study with one of the world's foremost programming firms.









Computer Usage Study Course is offered by Computer Usage Education, a subsidiary of Computer Usage Company, Inc., one of the world's oldest and largest computer programming organizations.

Since its start 11 years ago, CUC has completed over 3,000 programs for such business giants as IBM, AT & T, GE, as well as Federal, State, and municipal departments.

Well-known and highly regarded as a pioneer in the programming field, CUC performs its work behind the scenes. Many of the projects with which it has been associated have made headline news.

In space: CUC helped develop the Surveyor which successfully reached the moon on its first flight.

In medicine: CUC helped develop programs to diagnose heart disease through computerized techniques.

In transportation: CUC helped develop a national system of air traffic control to make travel safe and faster.

In marketing, finance, defense, science, management, CUC continues to make news with an expertise in programming that is second to none.

To share its vast experience and knowledge, Computer Usage Education also offers a series of world-wide educational seminars dealing with the most modern data processing methods and analytical techniques. Many of the foremost executives and department heads of major business organizations attend these meetings throughout the United States and in Europe.

Now, to fill the enormous demand for all-around computer training, CUE has developed the unique Computer Usage Study Course described in this booklet.

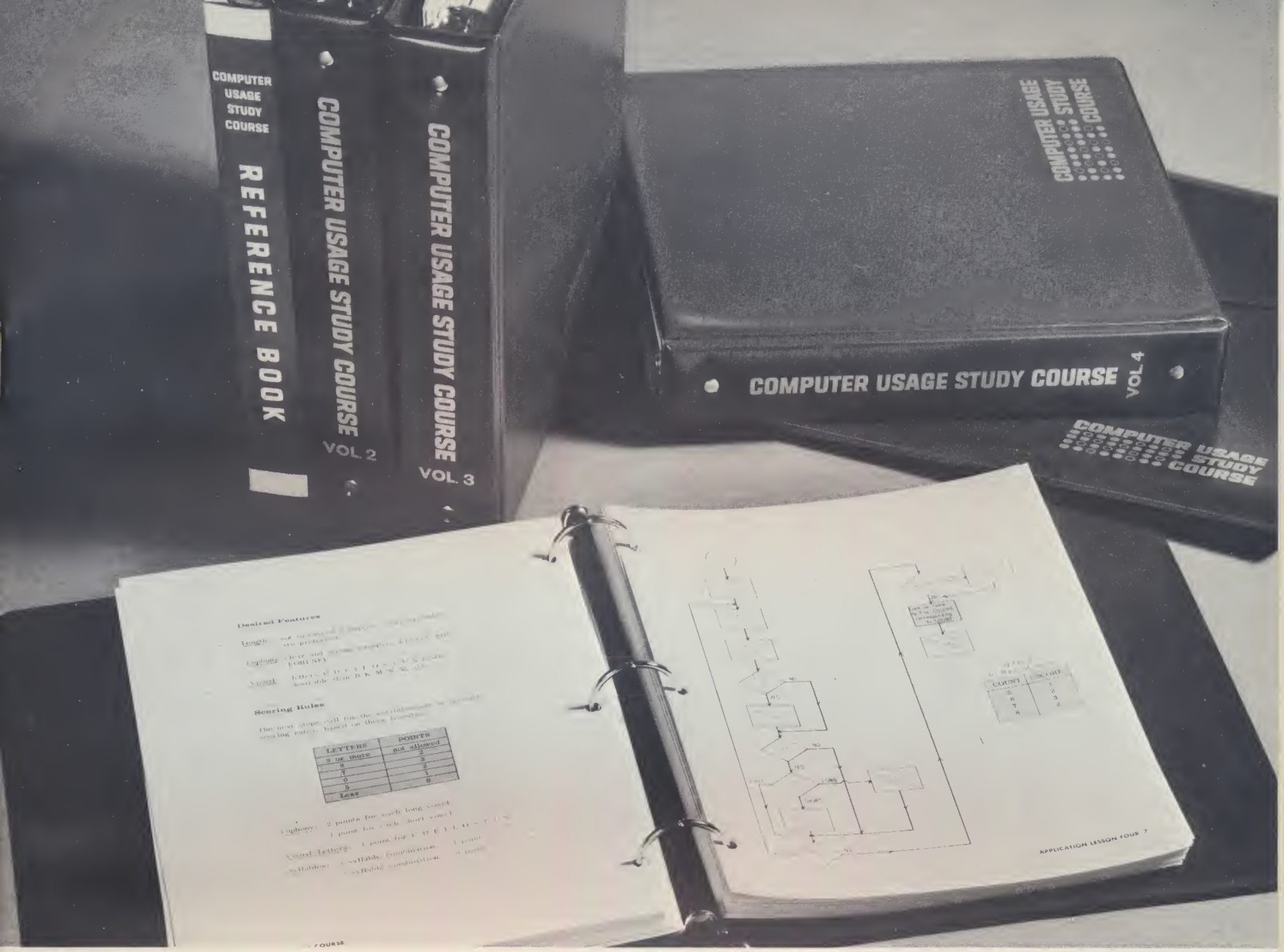
Every instructor in the Course was trained by the same methods pioneered by the Company and distilled into your Course. *Barron's Weekly* calls them "the deepest and most experienced group of EDP programmers in the business."

These instructors offer more than just knowledge. Each has demonstrated a pronounced flair for teaching combined with genuine empathy. Their dedication to your interests is paralleled by a truly superior home study course. That's why Computer Usage Study Course is so singularly prepared to help you achieve success.



Some of the clients served by Computer Usage Company

American Cyanamid Company
Ampex Corporation
Beckman Instruments
Bell Telephone Laboratories
Bendix Corporation
Burroughs Corporation
Continental Oil Company
Curtiss Wright Corporation
Dennison Manufacturing Company
Digitronics
Douglas Aircraft Company
Esso Research and Engineering Company
General Electric Company
General Foods Corporation
W. R. Grace and Company
Grumman Aircraft Corp.
Honeywell Inc.
Hughes Aircraft Company
Humble Oil & Refining Co.
IBM World Trade Corp.
International Business Machines Corporation
Kollsman Instrument Corporation
Litton Systems, Inc.
Lockheed Missiles and Space Company
Martin-Marietta Corp.
McGraw-Hill Publishing Company
Melpar, Inc.
Merck & Company, Inc.
Metro-Goldwyn-Mayer Inc.
North American Aviation, Inc.
Philco-Ford Corporation
Radio Corporation of America
Raytheon Company
Republic Aviation Corporation
The Schaeffer Brewing Company
Schering Corporation
Shell Development Company
Shell Oil Company
Socony Mobil Oil Company
Space Technology Laboratory
Sperry Gyroscope Division, Sperry Rand Corp.
Standard Oil Company of California
Standard Oil Company (New Jersey)
Sylvania Electric Products, Inc.
Tidewater Oil Company
Union Carbide Corporation
United Aircraft of Canada
United States Rubber Corp.
Westinghouse Electric Corporation
U.S. Air Force Office of Scientific Research
U.S. National Institutes of Health
U.S. Naval Weapons Laboratory
U.S. Forestry Service
U.S. Department of the Army
U.S. Department of Defense
U.S. Department of Commerce
U.S. Federal Aviation Agency
U.S. National Aeronautics and Space Administration
American Airlines
American Telephone and Telegraph Company
Baltimore and Ohio Railroad
Columbia Broadcasting System, Inc.
Dun and Bradstreet
General Telephone Laboratories
New England Power Service Company
Pacific Gas and Electric Company
Equitable Life Assurance Society
General Motors Acceptance Corp.
Great American Insurance Company
Home Life Insurance Corp.
Metropolitan Life Insurance Company
Prudential Life Insurance Company of America
State Street Bank & Trust Company
Atomic Power Development Associates
Arthur D. Little, Inc.
Loew's Hotels
Los Angeles Newspaper Service Bureau
Manhattan Life Insurance Co.
State of California, Department of Education
Broadcast Music Inc.
National Shirt Company



This is Computer Usage Study Course.

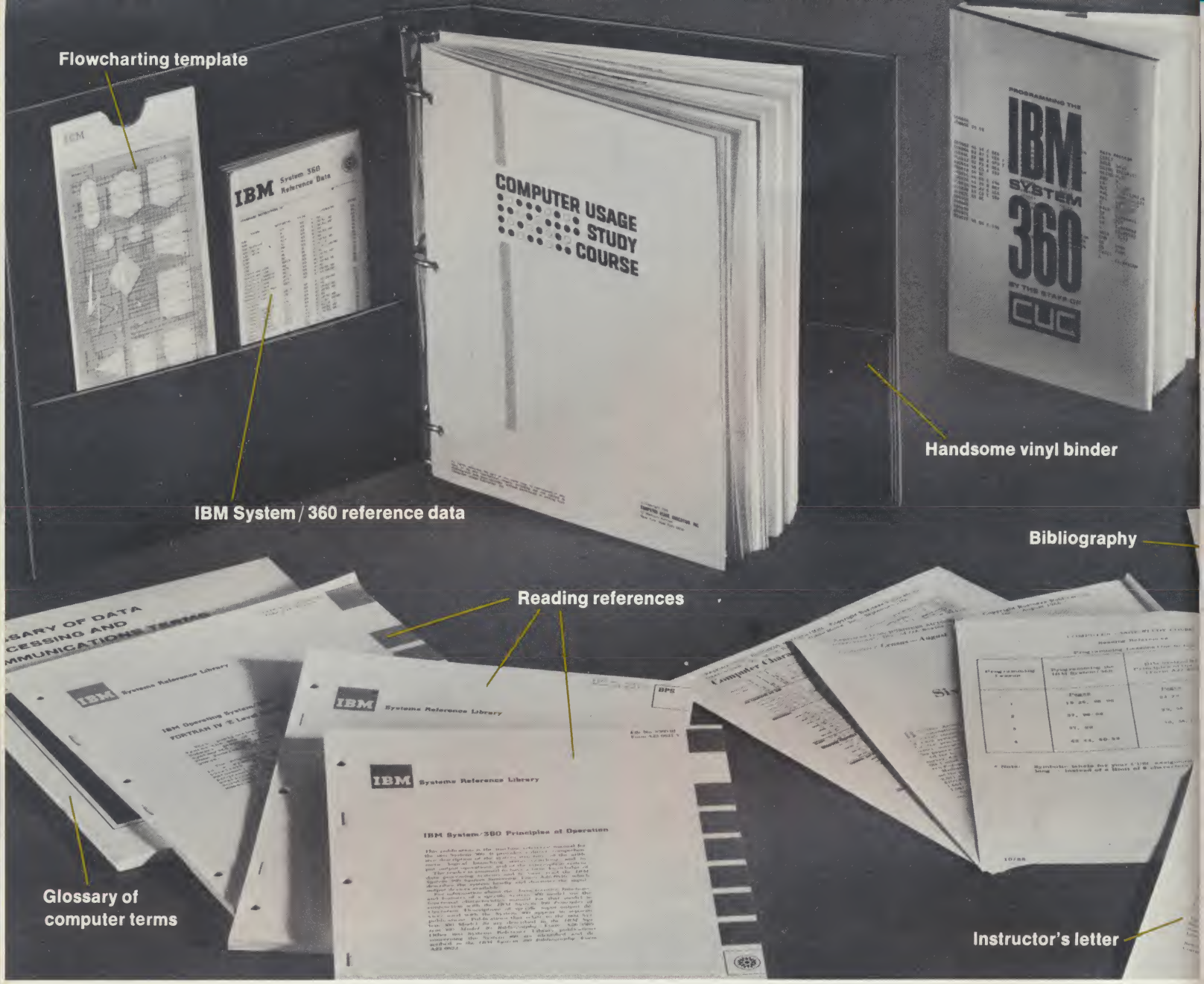
It offers you a comprehensive education in computer programming, background, and applications. The Course material is the equivalent of five University extension courses: System/360 Programming, Fortran IV Programming, Cobol Programming, Computer Fundamentals, and Computer Applications.

You receive a complete portfolio of computer and programming supplies—everything you need to master computers.

The Course material contains more than 1,000 large looseleaf pages, color-coded for easy reference. It is printed in clear, easy-to-read type with hundreds of special charts, illustrations, and photos.

- There are 24 lessons in all. You receive a set of four handsome vinyl binders to store your lessons during your instruction. After you complete the Course, these binders provide a permanent library of modern computer programming techniques for ready referral.
- You receive the only available book on IBM System/360 programming. It is the 316-page *Programming the IBM System/360*, written by the staff of Computer Usage Company, published by John Wiley and Sons. The single volume covers techniques used by experienced programmers. It is included with your Course.
- You receive a full package of programming and computer instruction supplies. It includes a Reference Book containing manuals and reference materials, Programming Assignment Workbook in which to keep corrected coding forms and computer print-outs, a complete supply of Coding and Flowchart Forms, Instructor Query Forms, and a Flowchart Template you will use throughout your career.
- In addition, you receive 24 Lesson Cards. Each one authorizes a run of your programs on our IBM System/360. Finally, you receive 10 "rerun" cards, authorizing you to improve 10 assignments on the System/360, if you wish.

All in all, you receive over 20 pounds of materials to help you master computer programming.



There are 24 lessons–with 4 parts to each lesson.

24 *background* lessons

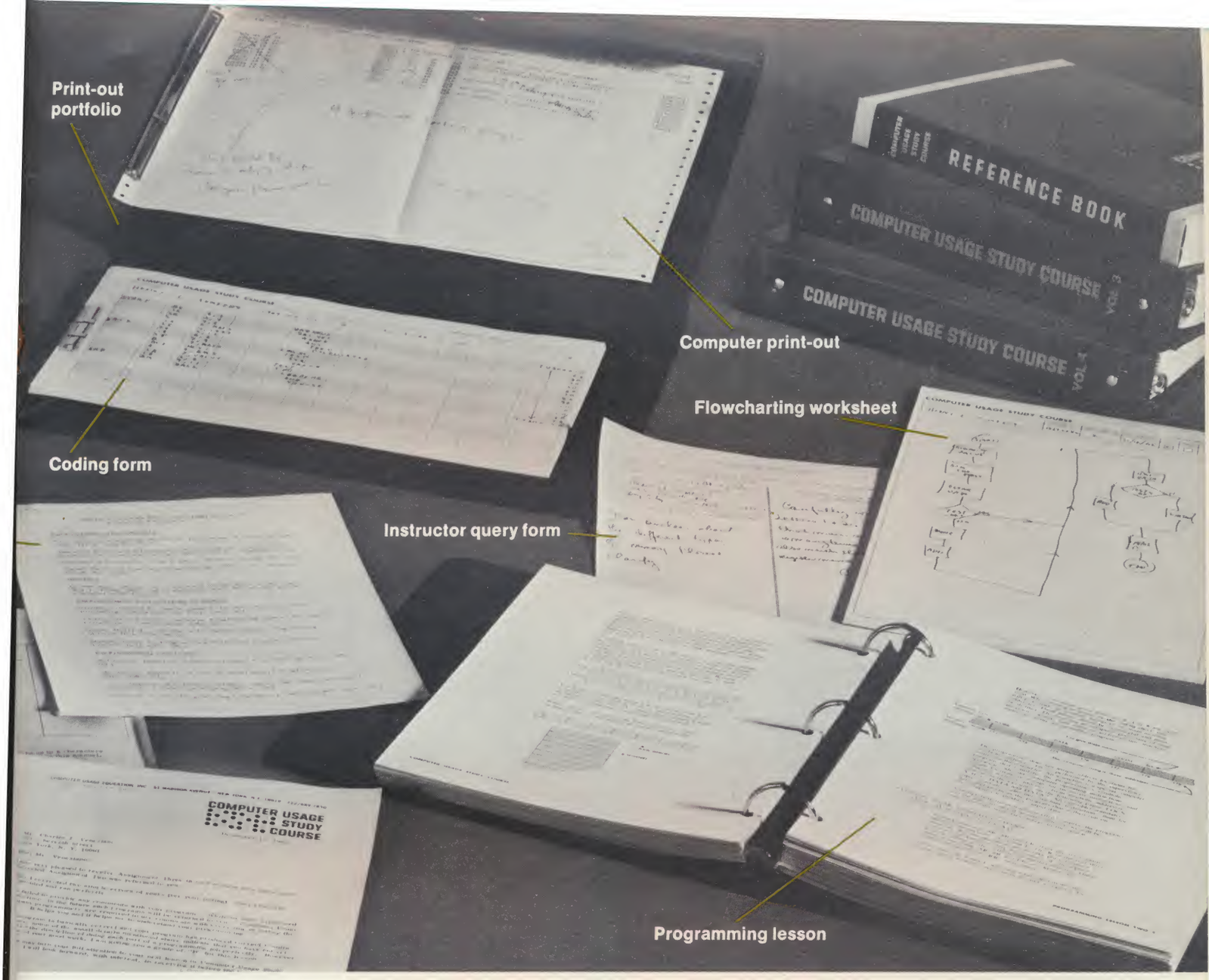
summarize the world of computers for you in simple steps.

- Programmers, Computers and the Problems They Solve
- The History of Calculating Machines
- How Computers Operate
- The Development of Electronic Computers
- The Computer Manufacturing Industry
- Computer Centers and How They Operate
- Positions in the Computer Industry
- The Work and Tools of the Systems Analyst
- Business Data Processing
- Techniques for Scientific Computing
- Recent History of Computers
- Input/Output Devices
- Assemblers and Compilers
- Batch Processing Monitors and Operating Systems
- Real Time Computing and Tele-Computing
- Multiprogramming
- Time-sharing
- Files and Records
- Sorting and Merging
- Debugging Tools and Techniques
- Specifying and Documenting Computer Programs
- Standards in Computing
- The Literature of Computing
- Professionalism and Professional Societies

24 *application* lessons

explain the computer in actual use in a multitude of areas.

- Savings Banks and Computers
- Computers in Inventory Control
- Medical Diagnosis by Computer
- Computer-Produced Trade Names
- Subscription Fulfillment
- Computers in Production Control
- Navigation by Computer
- Computer Aided Typesetting
- Processing the Payroll by Computer
- Highway Design Engineering
- Plot Subdivision & Computer-Aided Civil Engineering
- Statistical Computing
- Design Automation
- Job Shop Scheduling
- Business Reports for Management
- Information Retrieval
- Production Control
- Market Research and Forecasting
- Scheduling Classes for High Schools
- Questionnaire Analysis
- Computer Aided Design
- Tracking Space Vehicles
- Management Information Systems
- Computers in Airline Reservations Systems



1 **The first part is a background lesson** on a fundamental computer topic. It is designed to give you a complete understanding of computer principles, equipment, and professional practices. After 24 lessons, you will be fully familiar with the history and growth of computers, how they operate, and the professional computer world.

2 **The second part is an application lesson.** Each deals with a specific example of how computers are used to process data. Each is an actual application drawn from Computer Usage case files—real-life programming assignments performed for many of the world's largest organizations.

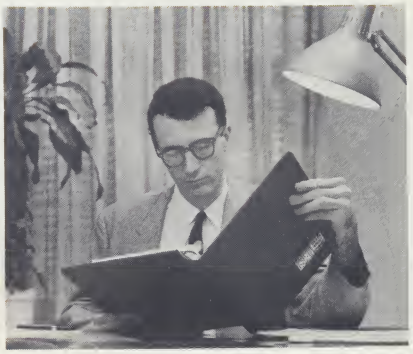
3 **The third part is a programming lesson** to teach you actual computer programming. These lessons are the distillation of our experience in training hundreds of Computer Usage Company programmers. No guesswork here. You follow easy-to-master procedures for programming on the third-generation IBM System/360—the computer which has made most other IBM computers obsolete. You also learn two programming languages: FORTRAN and COBOL.

4 **The fourth part is your programming assignment.** The only real way to learn computer programming is to *do* it. From your very first lesson on, you write an actual program to be run on our IBM System/360. By the end of the Course, you will have run 24 programs—with returned print-outs to prove it.

How you study at home.

From the moment of your enrollment in Computer Usage Study Course, you learn at home in close contact with both professional programming instructors and the computer. You work steadily and surely towards your goal.

1



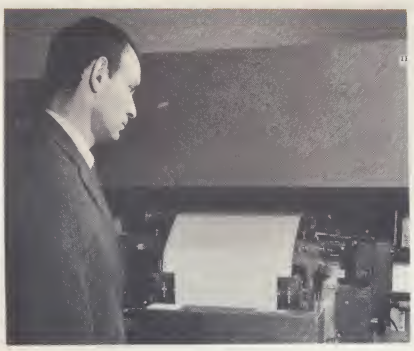
A professional computer programmer works alone in the privacy of his office. You can learn programming the same way in the comfort of your own home—at your own speed.

4



The program which you have written at home is now processed by the same procedures used with regular programs. It is punched into IBM cards in our keypunch room.

7



Your instructor takes a personal interest in your program. Here, he is watching the results of your program as it emerges from the high-speed printer.

8



Your instructor studies your print-out in detail. He writes constructive comments right on your print-out, with suggestions on how to improve your program. He should know. He's a "pro."

2



You write programs, starting with Lesson One. Your instruction supplies include all the materials you require. These materials duplicate those used by Computer Usage Company programmers. You actually perform the job of a computer programmer—at home.

3



Your instructor is an expert CUC programmer himself. He checks your programs before they are run on our computer to make absolutely certain you have understood the lessons.

5



Your program is being fed into the card reader of our IBM System/360. Now it is ready to run.

6



Our IBM System/360 computer is all set to run your program. Once the operator presses the button, *your* program tells the computer what to do. You command a multi-million dollar machine.

9



Your instructor dictates a personal letter to you. He tells you in detail just what you should do to improve your programming skills. His evaluation of your progress offers valuable guidance for your next lesson.

10



You've received your print-out with your instructor's comments and detailed letter. You're ready for your next lesson. You're learning to be an expert because you are working with an expert.

Questions & Answers

about Computer Usage Study Course

Are there any other Courses like yours?

No. Computer Usage Study Course is unique because it is based on our own methods and techniques developed through 11 years of serving some of America's largest companies.

The Course is the equivalent of four separate university extension courses. If, like most employed adults, you took one course per semester, you would require two years to complete all four courses. Computer Usage Study Course permits you to study all the computer subjects simultaneously for just one fee.

All it takes is a few pleasant hours a week in your own home. You are under no pressure. You study at your own speed, unhampered by slower students. And you receive the best individual instruction our instructors have to offer.

How will the Course help me in my specialized field?

Many of our students are specialists. They are accountants, bank tellers, engineers, supervisors and administrators. They do not plan to leave their present positions. They are taking the Course to understand computerization in their particular field as well as in a wide range of business, science, and industry.

Each of the 24 computer applications covered by the Course is a typical, realistic problem solved by a computer. These specialized solutions can be related to your special area of interest and guide you in creating computer applications of your own.

Can I master programming if I was a poor math student?

Any professional computer programmer will tell you that an aptitude for mathematics is not essential for a programmer. The important requirement is a sound, logical, orderly mind. At Computer Usage Company, successful programmers have been musicians, secretaries, and English students.

Why should I study programming when my company already has a programming department?

We have found that to understand programming, you should know how to program. A general knowledge of computers is simply not enough. You must know programming well enough to communicate effectively with the programming department. Only when you have actual, first-hand experience in every phase of programming, are you in a position to ascertain what the computer can—and cannot do. Computer Usage Study Course give this valuable programming experience even though you will not act as a programmer in your company.

What does "print-out" mean?

A print-out is a printed form showing the result of the computer's calculations. Since they are turned out by the computer's printer, they are called print-outs. You receive one or more print-outs with each lesson. Your instructor adds his comments to the print-out so that you can fully understand each specific procedure.

With your first assignment, you also receive the keypunched cards used to give your programming instructions to the IBM System/360. We want you to understand this key element in computing. Computer Usage Study Course omits nothing. It is comprehensively complete down to the last detail.

Can I actually master computers—at home—without seeing or being near one?

Yes. In fact, with the deepest experience in training programmers in the business, Computer Usage Education firmly states that home study is the best way for you to learn. You study at home—alone, just the way a programmer works in his office—alone.

Programmers, in fact, are usually located far from the computer room. Messengers take their programs to the machine and bring back print-outs. Only the operator must be in physical contact with the computer—the programmer need never see it.

Can I study while I am in the Service?

Yes. The Armed Forces encourages self-improvement training from qualified home study courses. Such training may also count toward promotion. During Service, you may have more time to devote to your studies and so finish faster. While the careers of other servicemen may be interrupted, yours will still be continuing—and if you plan to remain in the Service, there are many opportunities to use your computer know-how in every branch. Wherever possible, your lessons and personalized instruction will follow you while you are in the Service. If, for some reason, you find it necessary to delay completing the Course during Service, we'll gladly allow an extension.

Will I work with just one instructor for the whole Course?

No. Your programs will be corrected by an instructor who is a specialist in that area. Thus, you get the benefit of many of the top professionals in the field who also know how to teach.

Can the cost of the Course count as an income tax deduction?

If you are already in the computer field, or if the Course will improve your position in your business or career, the cost may be deducted as a business expense. Before making this deduction, however, you should check with a qualified expert to make sure that it meets legal requirements.

Whom do I contact if I have any problems during my Course?

Check with your instructor on the form provided for you with the Course. Or get in touch with our Student Services Department which was established specifically to help you get over any "rough" spots.

How long can I take to finish the Course?

Ordinarily, the Course can be completed in 8 to 14 months. However, you may take up to three full years. If you need even more time, you can apply for an extension based on a valid reason. We'll do our best to grant it.

Why study the IBM System/360?

System/360 is IBM's latest computer. Perhaps you have heard it referred to as a "third-generation" computer. It is the most in-demand computer available. As of the end of 1966, 4,000 of these computers were in operation. 20,000 more will be placed in 1967 and 1968. Very few trained System/360 programmers are available for them. Of the 100,000 new programmers needed in the next five years, those who know the System/360 will be most in demand.

This computer is so new that Computer Usage Education is one of the very few educational institutions offering System/360 training. In fact, our parent company pioneered programming techniques for the System/360 and wrote the only book on it available today.

Will my company pay for this course?

Many companies do. Send for our booklet E, which spells out the benefits to your company of your computer education.

Can I get my money back if I don't like the Course?

Yes. You will be given a liberal refund if you wish to withdraw. Where state laws permit, we follow the exact policy recommended by the National Home Study Council. *Withdrawal requests are handled at once.* And, if we determine, on our own and without your request, that you will not benefit from the Course, you will receive a refund of a substantial portion of your tuition. Thus, you are protected two ways: if you withdraw or if we terminate your enrollment.

Our Job Referral Service is free to all who complete our Course.

Use it whenever you wish, as often as you wish. The staff has contact with job opportunities in every area dealing with computer programming. Warm and understanding counselors will do their utmost to help you utilize your new skills to best advantage. The rapid growth of the field makes job referrals easy. Your training qualifies you at once.

During your course of study, our Student Service Department will gladly guide you.

This department offers career guidance and counseling to all Computer Usage Study Course students. Friendly advisors will promptly answer your questions about training, equipment, and job availabilities. The sole mission of the Student Service Department is to help you.

The price of the Course includes everything.

Computer Usage Study Course includes use of our IBM System/360. During your study, the computer will run from 24 to 34 programs for you. You pay nothing extra to have your programs run. We offer this service as part of the Course.

In addition to computer time, you get all 24 four-part lessons, textbook, workbook, reading references, coding and flowchart forms, template—whatever you require to complete your studies—for the single price of the Course.

Termination/Withdrawal Policy protects you

A liberal termination/withdrawal policy protects your interests. If, after a few lessons, you show poor progress and an unlikelihood of profiting from the Course, your registration will be terminated and proportionate refund made according to a set schedule.

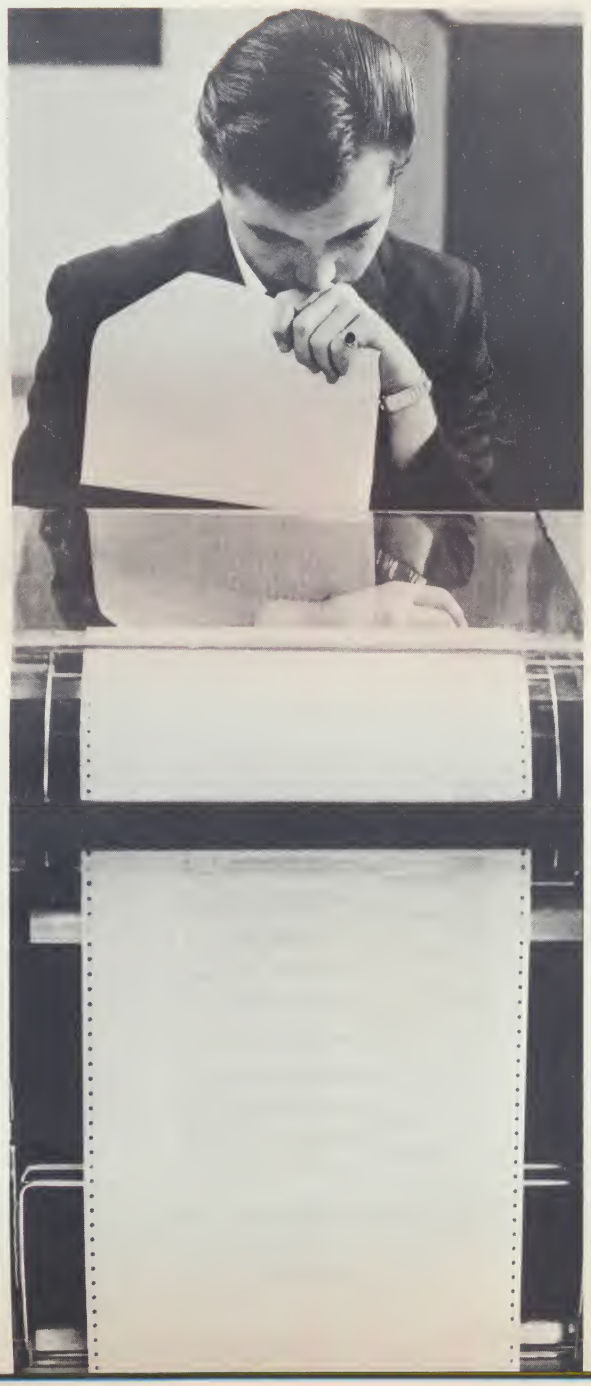
If you wish to withdraw from the Course, for any reason, you may do so and receive a refund as scheduled.

This is your Completion Certificate.

It is awarded to you when you have satisfactorily completed Computer Usage Study Course. Framed and hung in your office or home, this certificate proudly signifies that you have received the finest home study training in computer programming.



Years from now, you'll remember this moment.



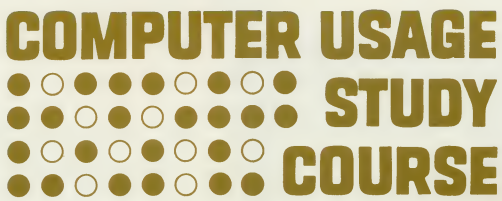
This is your moment of decision. All the facts on the challenge and opportunity offered by Computer Usage Study Course have been presented for your review. It should be readily apparent that a knowledge of computers and a developed skill as a computer programmer will enable you to take your place in the computer age and move ahead to a more financially secure future and a prestige-filled career.

You have shown your interest and desire for greater self-fulfillment by reading this booklet. That was the first step. The next step leads you directly into the world of computers, guided by all the resources at our command.

Years from today, you'll remember this as the moment you said "yes" to your future—by signing and returning your Enrollment Application.

Do it today. You'll always be glad you did!

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